

This Page Is Inserted by IFW Operations
and is not a part of the Official Record

BEST AVAILABLE IMAGES

Defective images within this document are accurate representations of the original documents submitted by the applicant.

Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

IMAGES ARE BEST AVAILABLE COPY.

**As rescanning documents *will not* correct images,
please do not report the images to the
Image Problem Mailbox.**

WHAT IS CLAIMED IS:

1. a magnetic tape drive including a head unit,
the head unit has
a plurality of recording heads which record data on a
5 magnetic tape, and
a servo head which performs a readout of a servo signal
recorded on the magnetic tape in order to perform a tracking
control of the head unit, wherein
recording heads are lined up along the width directions
10 with respect to the magnetic tape,
the distance between adjacent recording heads is the same
as the distance between adjacent data tracks to be formed on
the magnetic tape by respective recording heads,
azimuth angles of adjacent recording heads differ with
15 each other, and
a plurality of data tracks are simultaneously formed on
the magnetic tape by respective recording heads, when
performing the recording of data on the magnetic tape.
- 20 2. A magnetic tape drive according to claim 1, wherein
the head unit has a plurality of reproducing heads which
performs the readout of data written by recording heads from
the magnetic tape, wherein reproducing heads are provided in
a one-to-one relationship with corresponding recording heads,
25 and wherein
the azimuth angle of each reproducing heads is the same

as that of corresponding recording head.

3. A magnetic tape drive according to claim 2, wherein
the width of the reproducing head is longer than the width
5 of the recording head.

4. A magnetic tape drive according to claim 2, wherein
the reproducing head has spare reproducing heads at both
sides in the width directions with respect to the magnetic tape,
10 wherein
the length and azimuth angle of the spare reproducing head
are the same as that of the reproducing head.

5. A magnetic tape drive according to claim 3, wherein
15 the reproducing head has spare reproducing heads at both
sides in the width directions with respect to the magnetic tape,
wherein
the length and azimuth angle of the spare reproducing head
are the same as that of the reproducing head.

20 6. A magnetic tape drive according to claim 4, wherein
only the data obtained by the reproducing head that covers
the entire data track in the width directions is used, when two
or more reproducing heads are simultaneously located on the
25 data track.

7. A magnetic tape drive according to claim 5, wherein
only the data obtained by the reproducing head that covers
the entire data track in the width directions is used, when two
or more reproducing heads are simultaneously located on the
5 data track.
8. A magnetic tape drive according to claim 1, wherein
azimuth angles of adjacent recording heads are
established at predetermined different angle whose absolute
10 value is the same value.
9. A magnetic tape drive according to claim 2, wherein
azimuth angles of adjacent recording heads are
established at predetermined different angle whose absolute
15 value is the same value.
10. A magnetic tape drive according to claim 3, wherein
azimuth angles of adjacent recording heads are
established at predetermined different angles whose absolute
20 value are the same value.
11. A magnetic tape drive according to claim 4, wherein
azimuth angles of adjacent recording heads are
established at predetermined different angle whose absolute
25 value is the same value.

12. A magnetic tape drive according to claim 5, wherein azimuth angles of adjacent recording heads are established at predetermined different angle whose absolute value is the same value.

5

13. A magnetic tape drive according to claim 6, wherein azimuth angles of adjacent recording heads are established at predetermined different angle whose absolute value is the same value.

10

14. A magnetic tape drive according to claim 7, wherein azimuth angles of adjacent recording heads are established at predetermined different angle whose absolute value is the same value.

15

15. A magnetic tape drive according to claim 1, wherein azimuth angles of recording heads differs with each other.

20

16. A magnetic tape drive according to claim 2, wherein azimuth angles of recording heads differs with each other.

17. A magnetic tape drive according to claim 3, wherein azimuth angles of recording heads differs with each other.

25

18. A magnetic tape drive according to claim 4, wherein azimuth angles of recording heads differs with each other.

19. A magnetic tape drive according to claim 5, wherein azimuth angles of recording heads differs with each other.
- 5 20. A magnetic tape drive according to claim 6, wherein azimuth angles of recording heads differs with each other.